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(56) Documents Cited

GB 2220918 A US 4938505 A US 4747619 A

US 4153163 A

(58) Field of Search

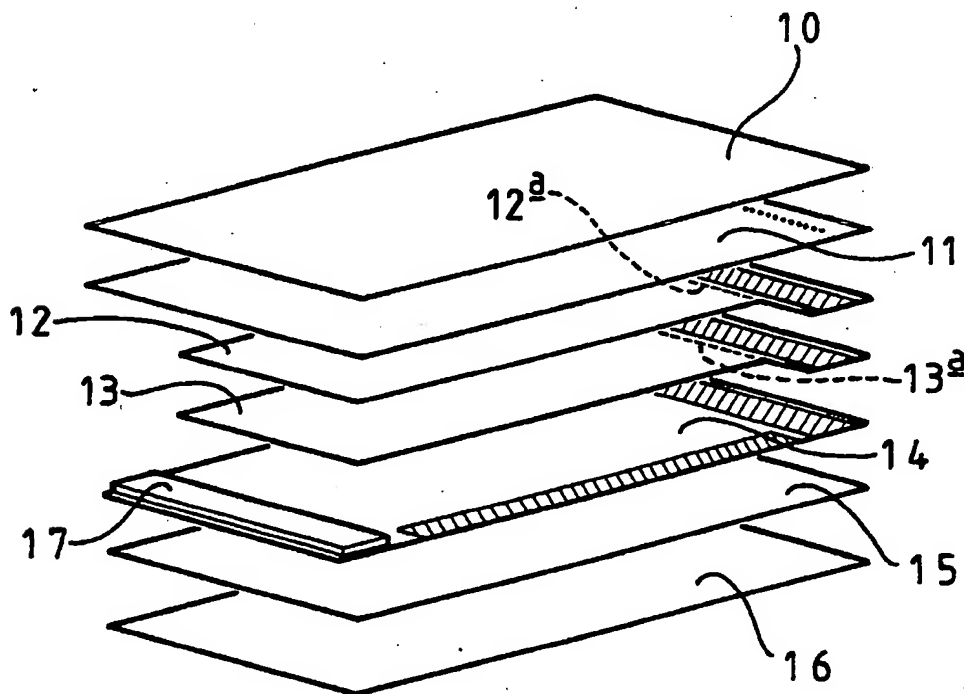
UK CL (Edition L) B8F FBC, B8K KAA

INT CL⁵ B65D 27/00, G09F 3/02 3/18 3/20

(54) Adhesive envelope

(57) An envelope comprises back and front sheets 11, 14 attached together around three edges to form a pocket, the outside of the back sheet being removably attached to one face of a backing sheet 15, which has its other face coated with a self adhesive material covered by a release sheet 16. A detachable front sheet 10 and contents sheets 12, 13 may also be provided. The backing sheet 15 may carry a coating of self-imaging material.

Possible uses include shipping labels and parking tickets, with the envelope portion being used for remittance of payments, fines etc.



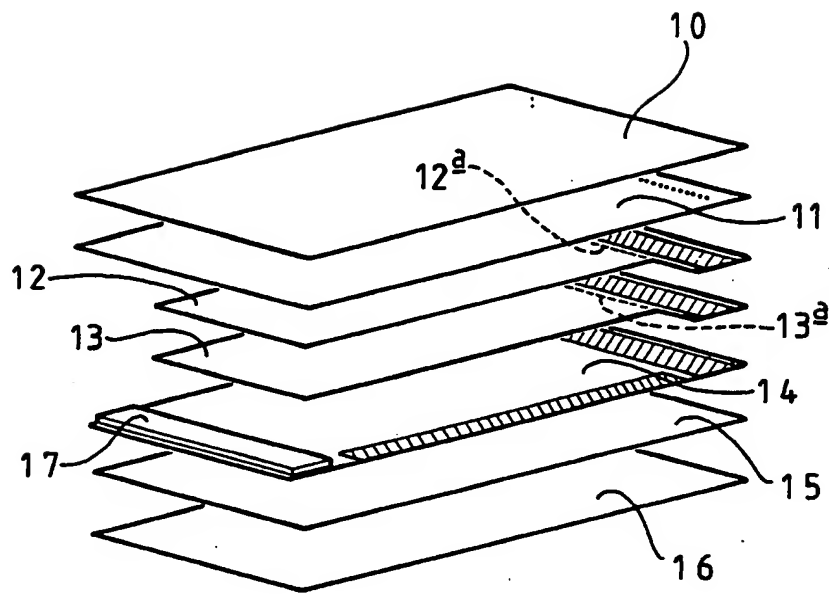
At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

The claims were filed later than the filing date within the period prescribed by Rule 25(1) of the Patents Rules 1990.

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ENVELOPE CONSTRUCTION

This invention relates to an envelope construction which includes a back-sheet for adhesively attaching to an object and an envelope portion which is detachable from such backing sheet. Such envelope constructions can be used for example, as shipping labels or vehicle parking etc. penalty notifications.

An envelope construction in accordance with the invention comprises an envelope front sheet, an envelope back sheet which are attached together around a portion of their peripheries, means for sealing together a remaining portion of the peripheries of the front and back sheets, and a backing sheet provided with self adhesive material covered by a release sheet on one side and attached on the other side to the envelope back sheet by means of a dry peel adhesive.

The backing sheet may be coated on said other side with a self-imaging material.

The envelope back sheet may be formed of polyethylene or other thermoplastic film. In this case, the front sheet may also be formed of or coated with such material so that attachment of the envelope front and back sheets to one another may be effected at least partially by heat-sealing.

The dry peel adhesive is preferably a styrene butadiene rubber based adhesive provided as a thin coating on the adjacent faces of the envelope back sheet and the backing sheet. However, other dry peel adhesives (i.e. adhesives which can be used to provide a separable bond without leaving a tacky surface) can be used.

An example of the invention is shown in the

accompanying drawing which shows an exploded perspective view of the envelope construction.

The construction shown includes a detachable leaf 10, formed of paper, an envelope front sheet 11, formed of polyethylene film, two envelope contents sheets 12 and 13 formed of paper, an envelope back sheet 14, a backing sheet 15 and a layer of release paper 16.

The envelope back sheet 14 is formed of polyethylene film and is coated on its back with a thin layer of a dry peel adhesive such as a styrene butadiene rubber adhesive to coact with a similar coating on the front of the backing sheet 15. The front of the backing sheet 15 also has a coating of a self-imaging material under the dry peel adhesive coating. The back of the backing sheet is coated with a self-adhesive material which is normally protected by the release layer 16.

The envelope contents sheets 12 and 13 are cut away at their lateral edges and perforated (at 12a, 13a) to allow the envelope front sheet 11 and the envelope back sheet to be directly attached to one another by heat sealing along the corresponding edges. The perforations 12a, 13a allow the contents sheets to be detached from marginal edge portions 12b, 13b thereof. These marginal edge portions are attached by adhesive to one another and to the envelope front and back sheets 11 and 14. In the construction shown the contents sheets are shorter than the envelope front and back sheets so that a strip 17 of double sided adhesive (with its own release layer), provided on a fourth edge of the envelope back sheet can be used for sealing the envelope.

An envelope construction as described above can be assembled on a continuous stationery collating machine, using five rolls of feed material. The first roll

contains a web of the laminated assembly of the envelope back sheet 14, the backing sheet 15 and the release sheet 16. The strip 17 is applied to one marginal edge of this web and a strip of adhesive to the opposite edge of the web in the collating machine. The contents sheets 12 and 13 are fed in from separate rolls and strips of adhesive are applied along one edge. Once the contents sheets have been collated, strips of paper are cut away at spaced positions, before a web of the envelope from sheets 11 is brought in from another roll. The envelope front and back sheets are heat-sealed together through the cutaway strips in the contents sheets. The detachable sheet 10 is finally brought into position before the envelopes are chopped (i.e. cut or guillotined) and stacked or perforated and fan-folded or rolled.

The envelopes described above can be used as shipping labels and are particularly useful for cash-on-delivery shipping. In this case the original sender can prepare the shipping labels using an impact printer of some kind, strip off the detachable sheet 10 and the release layer 16 and attach each label to a package. The receiver can peel the envelope from the label, insert his payment, seal the envelope, and hand it to the delivery man for transmission back to the sender. A copy of the original address data remains on the backing sheet 15.

Neither the detachable sheet 10 nor the contents sheet need be provided. Where there are no contents sheets, the front and back envelope sheets may be attached together directly by adhesive or heat sealing.

The contents sheets may be longer than the envelope front and back sheets to facilitate removal before closing the envelope.

The back sheet of the envelope may be longer than the front sheet thereof to enable it to be folded in front of the front sheet. In this case the adhesive strip may be provided on the front sheet.

For label use, the envelope front sheet may be transparent or translucent, but in some other applications it may be formed of paper which may, if required, be coated with a thermoplastic material on either side or both sides.

Where one or both of the adjacent faces of the envelope front and back sheets is or are paper adhesive may be used to attach the envelope edges together. When adjacent faces are both thermoplastic, heat-sealing is preferable, but adhesive attachment is also possible. It has also been found that a sound connection between thermoplastic or thermoplastic faced sheets can be obtained by adhesively attaching each to an intervening continuous paper sheet.

The construction described also leads itself to use in vehicle ticketing by parking wardens or police, where payments in the form of money orders or cheques may be remitted to the relevant authority using the removable envelope assembly.

CLAIMS

1. An envelope construction comprising an envelope front sheet and an envelope back sheet which are attached together around a portion of their peripheries, means for sealing together a remaining portion of the peripheries of the front and back sheets, and a backing sheet provided with self adhesive material covered by a release sheet on one side and attached on the other side to the envelope back sheet by means of a dry peel adhesive.
2. An envelope construction as claimed in claim 1 in which said backing sheet is coated with a self-imaging material.
3. An envelope construction as claimed in claim 1 or claim 2 in which the envelope back sheet is formed of a thermoplastic film.
4. An envelope construction as claimed in claim 3 in which said front sheet is formed of or coated with a thermoplastic film, attachment of the envelope front and back sheets being at least in part by heat-sealing.
5. An envelope construction as claimed in claim 4 in which the envelope front and back sheets are attached together along one pair of opposite edges by heat sealing and along a further edge by adhesive.
6. An envelope construction as claimed in claim 5 in which attachment of the envelope front and back sheets along said further edge is made through the intermediary of one or more intervening paper sheets.
7. An envelope as claimed in claim 3 in which the envelope front and back sheets are adhesively attached

together through the intermediary of one or more intervening paper sheets.

8. An envelope as claimed in any preceding claim in which said dry peel adhesive is a styrene butadiene rubber based adhesive provided as a thin coating on the adjacent faces of each of the envelope back sheet and the backing sheet.

9. An envelope construction substantially as hereinbefore described with reference to the accompanying drawings.

Patents Act 1977
Examiner's report to the Comptroller under
section 17 (The Search Report)

Application number

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Relevant Technical fields

- (i) UK CI (Edition L) B8K: KAA
 B8F: FBC
- (ii) Int CI (Edition 5) B65D 27/00; E09F 3/02, 3/18
 3/20

Search Examiner

A C HOWARD

Databases (see over)

(i) UK Patent Office

(ii)

Date of Search

20 AUGUST 1993

Documents considered relevant following a search in respect of claims 1-9

Category (see over)	Identity of document and relevant passages	Relevant to claim(s)
Y	GB 2220918 A (KENRICK & JEFFERSON) whole spec relevant	1-7
Y	US 4938505 (GRUTTEMEYER ET AL) see Figure 2 and corresponding text	1-7
Y	US 4747619 (SAGER) see Figure 4 and column 1 line 61 - column 2 line 18	1-7
Y	US 4153163 (ALDERMAN ET AL) see especially the abstract	1-7

Category	Identity of document and relevant passages	Relevant to claim(s)

Categories of documents

X: Document indicating lack of novelty or of inventive step.

Y: Document indicating lack of inventive step if combined with one or more other documents of the same category.

A: Document indicating technological background and/or state of the art.

P: Document published on or after the declared priority date but before the filing date of the present application.

E: Patent document published on or after, but with priority date earlier than, the filing date of the present application.

&: Member of the same patent family, corresponding document.

Databases: The UK Patent Office database comprises classified collections of GB, EP, WO and US patent specifications as outlined periodically in the Official Journal (Patents). The on-line databases considered for search are also listed periodically in the Official Journal (Patents).